



Tree Appraisal

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Trees provide many benefits and value to property owners in functional, aesthetic, social, environmental — and even economic — ways. Value may be defined as the present worth of future benefits. Many of these benefits can be quantified by a dollar figure, and it is the responsibility of an appraiser to assign monetary value. Appraising trees and living landscape components can be challenging, and requires training, expertise and experience.

The methods used to value trees are published in *The Guide for Plant Appraisal, 9th Edition*, authored by the Council of Tree and Landscape Appraisers (CTLA). The guide is endorsed by all the major arboriculture, horticulture and real estate industry organizations. When conducting an appraisal, be sure to use the current edition. The guide describes the various appraisal processes and gives examples of each. Although it is a good tool for the valuation of plants, it is only a guide and the procedures involved require care and experience.

The purpose of an appraisal is defined by the clients' needs. These needs may include tort claims, insurance claims, tax deductions, real estate assessment and proactive planning. An appraisal estimates the defined value of personal property, including plants. The

tree appraisal process is used to develop a supported estimate of current value.

Unfortunately, most appraisals are done after trees have been removed or damaged. This situation requires additional investigation and might include determining pre-casualty value or sampling on a local basis. The best time to conduct an appraisal is prior to any incident or damage. This is rarely done, however. If available, previous site records, tree assessments, site reviews, images and even a witness can help determine the tree's pre-damage condition. With all the facts gathered, it is the duty of the appraiser to determine the appropriate method and provide an unbiased valuation. The appraiser should document all activities related to the process, from initial contact with the client — including establishing the background information on the tree — to inspecting the site and formulating values.

Regardless of the appraisal method used, there are some primary factors to consider. The four major elements involved in properly assessing the value of a tree are size, species, condition and location. A thorough understanding of each is imperative; otherwise, the appraisal will lack credibility and significance for the case.



Tree condition or health is an important rating determination.



Location is one factor in determining a tree's value.

The **species** rating is a comparative value given to the tree or plant based upon its individual characteristics. Consideration is given to the plant's assets and its inherent qualities. This rating is provided by a council of experts in the area and will vary within regions around the country. Additionally, there can be variations in ratings within the state, relative to hardiness zones. Adjustments will be necessary based on subjective observation. Check the local chapter of the International Society of Arboriculture for more information on the ratings for your state.

The **condition** of the tree is a subjective determination made by the appraiser during the inspection. It is an assessment of the tree's structural integrity and health at the time of appraisal. Thought should be given to rooting, branching, health and vigor, any damage or wounds, and evidence of pest infestation. It is important to note the current condition as the most reasonable gauge for the rating determination.

The **size** of the plant is measured using common tools and industry standards. A diameter tape or tape measure can be used to measure trunk size, and is typically recorded as the diameter at 4.5 feet above grade, or shoulder height. Consult with the appraisal guide on proper sizing procedures.

The **location** factor involves the landscape value of the site and the placement of the tree on the property. Consider the location of the property, overall quality of the landscape, hardscape and related elements. Understand the tree's contribution to the site, its function and the aesthetics to determine how effectively the placement of the tree provides these benefits.



A diameter tape aids in calculating tree size.

After the primary plant and site assessments have been completed, determination of the proper approach is necessary. *The Guide for Plant Appraisal* details three basic methods for plant valuation: cost, income and market approaches. The approach chosen depends on the kind of property, purpose of the appraisal and quality of information for analysis. It may be necessary to use other methods, or a combination of approaches, in the appraisal process to verify the results.

The **Cost Approach** considers the amount in dollars to either repair damage to the tree or replace the tree. There are various methods to use within this approach:

Replacement Cost estimates the cost of replacing a tree in the same location with the same species and, if possible, of similar size. However, in most cases a tree is too large to be replaced by a single tree and still be of equal value. In those cases, appraisers may designate several smaller trees deemed collectively to be equivalent to the original tree. This becomes a matter of calculating the value of the replacement trees and their associated costs. Often, some type of settlement is involved in the negotiations, as well. This usually is found to be the most accurate determination of market value of the tree.

Trunk Formula (TFM) defines value in comparison to other trees of the same species. However, it does not necessarily provide adequate market value of the tree. The TFM often is used when the tree is too large to be replaced with typical nursery stock, and can be a good representation of overall value to the property. The basic value of a tree is the sum of two factors: the cost of transplanting the largest normally available tree of the same or comparable species, and the increase in value because of the larger size of the tree being appraised compared to the size of the replacement tree. An example can be found at the end of this publication.

The formula used in the process is stated as:

Value = Basic Tree Cost x Species Rating % x Condition Rating % x Location Rating %

- **Basic Tree Cost** is the Replacement Tree Cost + (Base Price x Adjusted Trunk Area, or ATA). Base price is determined to be \$65 for Indiana. ATA is the area of the tree trunk in square inches measured at standard height of 4.5 feet, less the area of the largest available transplantable tree, which is determined to be \$800 in Indiana. A table of conversions from Diameter at Breast Height, or DBH, to ATA is available in the CTLA guide.
- **Species** rating is the factor assigned to a given tree species, based on the list provided in this publication. This subjective rating is based on individual qualities and traits, which may vary geographically within the state because of local climate and environmental influences.
- **Location** rating is a value determined by the tree's placement in the landscape and the overall area in which the property is located. It is derived by the following equation: (Site % + Contribution % + Placement %) ÷ 3
- **Condition** rating is determined by establishing the overall health and structural integrity of the tree. An assessment of condition includes roots, trunk and canopy. The appraiser and the appraisal situation determine the amount of detail in this assessment.

- **Replacement Tree Costs** are the cost of the tree, cost of transporting the tree to the site, planting it in the same location as the appraised tree and monitoring it during the maintenance period. This cost is subjective to location.

Example: A residential site located on Main Street has a Black Walnut, *Juglans nigra*, located in the rear of the site, near the garage. The tree measures 33 inches DBH, and is in good condition. The tree owners wish to have it appraised to determine the value of the tree on their property.

Using the Trunk Formula Method as defined by the Council of Tree and Landscape Appraisers as

Value = Basic Tree Cost x Species Rating % x Condition Rating % x Location Rating %

the formula can be expanded to determine the values for each component as:

$$V = (RC + ((BP \times (ATA - ATr)) \times SR \times CR \times LR)$$

V = Value of appraised plant.

RC = Replacement Cost for the average largest transplantable sized tree that a nursery can provide in this area. This has been determined to be \$800 for Indiana.

BP = Base Price per square inch dollar value of a tree. For Indiana, this has been determined to be \$65.

ATA = Adjusted Trunk Area value at DBH in square inches of the tree. This number is available from the chart provided in the CTLA guide.

ATr = Adjusted Trunk replacement value at DBH in square inches of the average largest transplantable sized tree that a nursery can provide in Indiana. This has been found to be 4 inches, which has a trunk area of 13 square inches.

SR = Species Rating value between .00 and 1.00, which can be determined by using the table provided. This is a subjective value, which can be adjusted to a higher or lower value, depending on the location in the state.

LR = Location Rating value between .00 and 1.00, and determined by rating the placement of the tree in the landscape. This value is an average of site, contribution and placement ratings.

CR = Condition Rating value between .00 and 1.00 for the tree, and determined by assessment of overall tree health and structure.

Using the information provided and subjectively rating the tree for appraisal, the formula values would be:

$$\text{Appraised Value} = \$800 + ((\$65 \times (835 \text{ in}^2 - 13 \text{ in}^2)) \times .50 \times .88 \times .70$$

Appraised Value = \$16,703 based on the assessment of the tree and property. This is the worth of the tree in relation to the property, site and location.

Cost of Repair calculates the cost to perform maintenance on the affected tree in order to repair damage. It includes wound treatment, cabling, bracing, pruning, pest management and associated cultural practices to improve health, such as supplemental irrigation, mulching and fertilization.

Cost of Cure is similar to Cost of Repair. This method is used to determine the cost of treatment that will return the property to the closest approximation of its original condition. This often is called “years to parity” and is a very detailed, intricate approach requiring diligence in the assessment and calculation of repairs. Both Cost of Repair and Cost of Cure approaches account for tree and debris removal, the replacement process and post-restoration maintenance.

The **Income Approach** is preferred when a property or segment of a property might provide income benefits. There are various methods within this approach, which includes crop values, forest appraisal and rental value.

Market Approach is based on market information derived from an investigation of property sales. The market approach will determine the market value of a property with and without the trees or their damage. This method may employ more than one approach to reach valuation. This is only one value indicator, and perhaps is best utilized as a reasonability check.

The appraisal method chosen will have a profound effect on the final value attributed to a tree or landscape. Results should be reasonable in relationship to the value of the property where it resides. Similar trees in different areas could have much different values. Studies have estimated that trees may account for up to 20 percent of the value of a residential property. In other circumstances, much lower values could result, depending on location and other factors.

There are several considerations that influence inspection and appraisal processes, and how characteristics translate into value. Laws governing appraisals dictate which method may be allowed in particular applications. Important, detailed discussions of tree appraisals can be found in the *Guide for Tree Appraisal*. The appraiser may assume the role of mediator, arbitrator, consulting expert or expert witness. In all situations, an appraisal might be a target for lawsuits. The appraiser should maintain proper insurance for protection. When an *expert* opinion is necessary, as for an insurance or legal claim, it is wise for the tree owner to consult with a professional arborist. Experience is critical to proper valuation of a tree.

Table 1. Species Rating for Landscape Trees — This list contains a sample of plants in the landscape that grow in Indiana, including native and non-native selections. This is not meant to be inclusive but, rather, representative of the majority of species found commonly in the urban forest. The ratings represent comparative values for species found in Indiana with consideration given to the following:

- Hardiness • Durability (structural integrity)
- Longevity • Biotic tolerance

These ratings do not take into consideration factors such as maintenance requirements, nonstructural tree characteristics (e.g., aesthetics) and site adaptability. Such factors are more appropriately considered in the rating of the tree’s **CONDITION AND LOCATION CLASSES**.

NOTE: The values contained in the Species Rating Guide should not be used without following the procedures identified and explained in the *Guide for Plant Appraisal, 9th Edition*, authored by the Council of Tree and Landscape Appraisers, and published by the International Society of Arboriculture.

Scientific Name, Common Name	Notes	Rating
<i>Abies concolor</i> , White or Concolor Fir		80
<i>Acer campestre</i> , Hedge Maple		60
<i>Acer xfreemanii</i> , Freeman Maple		70
<i>Acer ginnala</i> , Amur Maple		60
<i>Acer griseum</i> , Paperbark Maple		70
<i>Acer miyabei</i> , Miyabe Maple		80
<i>Acer negundo</i> , Boxelder		20
<i>Acer nigrum</i> , Black Maple		80
<i>Acer palmatum</i> , Japanese Maple		70
<i>Acer platanoides</i> , Norway Maple	Invasive species	20
<i>Acer pseudoplatanus</i> , Sycamore Maple		70
<i>Acer rubrum</i> , Red or Swamp Maple		60
<i>Acer saccharinum</i> , Silver Maple		40
<i>Acer saccharum</i> , Sugar Maple	Improved cultivars	80
<i>Acer saccharum</i> , Sugar Maple	Improved cultivars	80
<i>Acer tataricum</i> , Tartarian Maple		70
<i>Acer triflorum</i> , Three-Flowered Maple		80
<i>Acer truncatum</i> , Purpleblow Maple		70
<i>Aesculus xcarnea</i> , Red Horsechestnut		70
<i>Aesculus glabra</i> , Ohio Buckeye		60
<i>Aesculus hippocastanum</i> , Common Horsechestnut		60
<i>Aesculus pavia</i> , Red Buckeye		70
<i>Ailanthus altissima</i> , Tree of Heaven	Prohibited-noxious species	20
<i>Albizia julibrissin</i> , Mimosa or Silk Tree		20

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<i>Alnus glutinosa</i> , European Black Alder	Invasive species	20
<i>Alnus incana</i> , White Alder		70
<i>Alnus rugosa</i> , Speckled Alder		70
<i>Amelanchier</i> , Serviceberry		70
<i>Asimina triloba</i> , Common Pawpaw		50
<i>Betula alleghaniensis (lutea)</i> , Yellow Birch		50
<i>Betula lenta</i> , Sweet Birch		50
<i>Betula nigra</i> , River or Red Birch		70
<i>Betula papyrifera</i> , Paper Birch		40
<i>Betula pendula</i> , European White Birch		20
<i>Betula populifolia</i> , Gray Birch		40
<i>Carpinus betulus</i> , European Hornbeam		70
<i>Carpinus caroliniana</i> , American Hornbeam (Blue Beech)		70
<i>Carya sp.</i> , Hickory	Various species	70
<i>Castanea dentata</i> , American Chestnut		20
<i>Castanea mollissima</i> , Chinese Chestnut		60
<i>Catalpa sp.</i> , Catalpa		40
<i>Celtis laevigata</i> , Sugar Hackberry	Southern locations	70
<i>Celtis occidentalis</i> , Common Hackberry		70
<i>Cercidiphyllum japonicum</i> , Katsura Tree		80
<i>Cercis canadensis</i> , Redbud		60
<i>Chionanthus virginicus</i> , Fringetree		60
<i>Cladrastis lutea (kentukea)</i> , Yellowwood		60
<i>Cornus alternifolia</i> , Pagoda Dogwood		70
<i>Cornus florida</i> , Flowering Dogwood		60
<i>Cornus kousa</i> , Kousa Dogwood		70
<i>Cornus mas</i> , Cornelian Cherry Dogwood		70
<i>Cornus officinalis</i> , Japanese Cornel Dogwood		70
<i>Corylus colurna</i> , Turkish Filbert		80
<i>Cotinus coggygria</i> , Common Smoke Tree		60
<i>Cotinus obovatus</i> , American Smoke Tree		70
<i>Crataegus crus-galli</i> , Cockspur Hawthorn		80
<i>Crataegus laevigata</i> , English Hawthorn		40
<i>Crataegus mollis</i> , Downy Hawthorn		50
<i>Crataegus phaenopyrum</i> , Washington Hawthorn		70
<i>Crataegus xlavallei</i> , Lavalley Hawthorn		60
<i>Crataegus 'Vaughn'</i> , Vaughn Hawthorn		60
<i>Crataegus viridis 'Winter King'</i> , Winter King Hawthorn		70
<i>Diospyros virginiana</i> , Common Persimmon	Male	70
<i>Diospyros virginiana</i> , Common Persimmon	Female	50
<i>Elaeagnus angustifolia</i> , Russian-Olive	Invasive species	20
<i>Eucommia ulmoides</i> , Hardy Rubber Tree		50

<i>Fagus grandifolia</i> , American Beech		80
<i>Fagus sylvatica</i> , European Beech		70
<i>Fraxinus americana</i> , White Ash	Rating subject to EAB and treatment protocol	70
<i>Fraxinus excelsior</i> , European Ash	Rating subject to EAB and treatment protocol	60
<i>Fraxinus pennsylvanica</i> , Green Ash	Rating subject to EAB and treatment protocol	60
<i>Fraxinus quadrangulata</i> , Blue Ash	Rating subject to EAB and treatment protocol	70
<i>Ginkgo biloba</i> , Ginkgo	Male	90
<i>Ginkgo biloba</i> , Ginkgo	Female	60
<i>Gleditsia triacanthos</i> , Honeylocust		70
<i>Gleditsia triacanthos f. inermis</i> , Thornless Honeylocust	Improved cultivars	50
<i>Gymnocladus dioica</i> , Kentucky Coffeetree	Male	80
<i>Gymnocladus dioica</i> , Kentucky Coffeetree	Female	60
<i>Halesia carolina</i> , Carolina Silverbell		70
<i>Ilex opaca</i> , American Holly		70
<i>Juglans cinerea</i> , Butternut		30
<i>Juglans nigra</i> , Black Walnut		40
<i>Juniperus chinensis</i> , Chinese Juniper		60
<i>Juniperus virginiana</i> , Eastern Red Cedar		60
<i>Koelreuteria paniculata</i> , Golden Raintree		60
<i>Larix decidua</i> , European Larch		60
<i>Larix kaempferi</i> , Japanese Larch		60
<i>Larix laricina</i> , American Larch		50
<i>Liquidambar styraciflua</i> , Sweetgum	Seedless varieties	80
<i>Liriodendron tulipifera</i> , Tuliptree		70
<i>Maclura pomifera</i> , Osage-Orange	Invasive species	20
<i>Magnolia acuminata</i> , Cucumbertree Magnolia		70
<i>Magnolia grandiflora</i> , Southern Magnolia		60
<i>Magnolia kobus</i> , Kobus Magnolia		60
<i>Magnolia xloebneri</i> , Loebner Magnolia	Improved cultivars	70
<i>Magnolia xsoulangiana</i> , Saucer Magnolia		70
<i>Magnolia virginiana</i> , Sweetbay Magnolia	Southern locations	70
<i>Malus</i> , Crabapple	Cultivar-dependent	80
<i>Metasequoia glyptostroboides</i> , Dawn Redwood		60
<i>Morus sp.</i> , Mulberry		40
<i>Nyssa sylvatica</i> , Sourgum (Black Tupelo)		80
<i>Ostrya virginiana</i> , Ironwood (Hophornbeam)		80
<i>Oxydendrum arboreum</i> , Sourwood		60

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<i>Paulownia tomentosa</i> , Paulownia (Princess Tree)	Invasive species	20
<i>Phellodendron amurense</i> , Amur Corktree	Invasive species	20
<i>Picea abies</i> , Norway Spruce		70
<i>Picea glauca</i> , White Spruce		70
<i>Picea glauca</i> var. <i>Densata</i> , Black Hills Spruce		70
<i>Picea omorika</i> , Serbian Spruce		70
<i>Picea pungens</i> , Colorado Spruce		70
<i>Pinus banksiana</i> , Jack Pine		40
<i>Pinus bungeana</i> , Lacebark Pine		70
<i>Pinus cembra</i> , Swiss Stone Pine		70
<i>Pinus echinata</i> , Short Leaf Pine		50
<i>Pinus nigra</i> , Austrian or Black Pine		40
<i>Pinus ponderosa</i> , Ponderosa Pine		60
<i>Pinus resinosa</i> , Red Pine		50
<i>Pinus strobus</i> , Eastern White Pine		70
<i>Pinus sylvestris</i> , Scotch Pine		40
<i>Platanus xacerifolia</i> , London Planetree		60
<i>Platanus occidentalis</i> , Sycamore		70
<i>Populus alba</i> , White or Silver Poplar		30
<i>Populus deltoides</i> , Cottonwood	Male	50
<i>Populus deltoides</i> , Cottonwood	Female	30
<i>Populus euroamericana</i> , Hybrid Poplar		50
<i>Populus grandidentata</i> , Bigtooth Aspen		50
<i>Populus nigra</i> 'Italica,' Lombardy Poplar		20
<i>Populus tremuloides</i> , Quaking Aspen		50
<i>Prunus americana</i> , Wild Plum		50
<i>Prunus armeniaca</i> var. <i>mandshurica</i> , Manchurian Apricot		50
<i>Prunus avium</i> , Sweet Cherry		40
<i>Prunus cerasifera</i> , Purple Leaf Plum		40
<i>Prunus maackii</i> , Amur Choke Cherry		60
<i>Prunus padus</i> , European Bird Cherry		40
<i>Prunus persica</i> , Common Peach		40
<i>Prunus sargentii</i> , Sargent Cherry		70
<i>Prunus serotina</i> , Black Cherry		50
<i>Prunus serrulata</i> , Japanese Flowering Cherry		40
<i>Prunus subhirtella</i> var. <i>pendula</i> , Weeping Cherry		40
<i>Prunus virginiana</i> , Choke Cherry		40
<i>Pseudotsuga menziesii</i> , Douglasfir		80
<i>Pyrus calleryana</i> , Callery Pear	Invasive species	20
<i>Quercus alba</i> , White Oak		90
<i>Quercus acutissima</i> , Sawtooth Oak		70
<i>Quercus bicolor</i> , Swamp White Oak		80
<i>Quercus coccinea</i> , Scarlet Oak		70

<i>Quercus ellipsoidalis</i> , Hill's or Northern Pin Oak		60
<i>Quercus falcata</i> var. <i>pagodaefolia</i> , Cherrybark Oak	Southern locations	70
<i>Quercus imbricaria</i> , Shingle Oak		70
<i>Quercus macrocarpa</i> , Bur Oak		90
<i>Quercus michauxii</i> , Swamp Chestnut Oak		70
<i>Quercus muehlenbergii</i> , Chinquapin Oak		80
<i>Quercus palustris</i> , Pin Oak		60
<i>Quercus phellos</i> , Willow Oak	Southern locations	70
<i>Quercus prinus</i> , Chestnut Oak		70
<i>Quercus robur</i> , English Oak	Southern locations	80
<i>Quercus rubra</i> , Red Oak		70
<i>Quercus shumardii</i> , Shumard Oak		70
<i>Quercus velutina</i> , Black Oak		60
<i>Rhamnus cathartica</i> , Common Buckthorn	Invasive species	20
<i>Robinia pseudoacacia</i> , Black Locust	Invasive species	20
<i>Salix alba</i> 'Tristis,' Weeping Willow		40
<i>Salix matsudana</i> 'Tortuosa,' Corkscrew Willow		30
<i>Salix nigra</i> , Black Willow		40
<i>Sassafras albidum</i> , Common Sassafras		70
<i>Sophora japonica</i> , Japanese Pagoda Tree	Southern locations	70
<i>Sorbus americana</i> , American Mountain Ash		40
<i>Sorbus alnifolia</i> , Korean Mountain Ash		50
<i>Sorbus aucuparia</i> , European Mountain Ash		50
<i>Syringa pekinensis</i> , Peking Lilac		70
<i>Syringa reticulata</i> , Japanese Tree Lilac		70
<i>Taxodium distichum</i> , Baldcypress		90
<i>Thuja occidentalis</i> , White Cedar Arborvitae		70
<i>Thuja orientalis</i> , Oriental Arborvitae		60
<i>Tilia americana</i> , American (Basswood) Linden		70
<i>Tilia cordata</i> , Little Leaf Linden		60
<i>Tilia xeuchlora</i> 'Redmond,' Redmond Linden		80
<i>Tilia tomentosa</i> , Silver Linden		70
<i>Tsuga canadensis</i> , Canadian Hemlock		80
<i>Ulmus</i> , Hybrid Elms		70
<i>Ulmus americana</i> , American Elm		30
<i>Ulmus carpinifolia</i> , English Elm		30
<i>Ulmus parvifolia</i> , Chinese or Lacebark Elm		70
<i>Ulmus pumila</i> , Siberian Elm		40
<i>Ulmus rubra</i> , Slippery or Red Elm		20
<i>Ulmus thomasi</i> , Rock Elm		30
<i>Viburnum prunifolium</i> , Blackhaw Viburnum		70
<i>Viburnum sieboldii</i> , Siebold Viburnum		60
<i>Zelkova serrata</i> , Japanese Zelkova		60

Table 2. Condition Rating for Landscape Trees — Each plant can have any combination of the following health or structural issues, and others. The expression of symptoms and signs is subjective. The appraiser should consider the individual species characteristics and use existing circumstances as a reasonable scale for condition determination. This table is a general representation to assist in formula values.

Condition Rating	Tree Structure Consider root condition/formation, trunk condition and branch assembly and arrangement	Tree Health Consider crown indicators including vigor, density, leaf size, quality and stem shoot extensions	Formula Values
Excellent	Root plate undisturbed and clear of any obstructions. Root flare has normal development. No visible trunk defects or cavities. Branch spacing/structure and attachments are free of any defects.	Perfect specimen with excellent form and vigor, well-balanced crown. Trunk is sound and solid. No apparent pest problems. Normal to exceeding shoot length on new growth. Leaf size and color normal. Exceptional life expectancy for the species.	1.0-.90
Good	Root plate appears normal; only minor damage may be found. Possible signs of root dysfunction around trunk flare. Minor trunk defects from previous injury, with good closure; less than 25% of bark section missing. Good branch habit, minor dieback with some signs of previous pruning. Codominant stem formation may be present. Minor corrections required.	Imperfect canopy density in few parts of the tree, 10% or less, lacking natural symmetry. Less than half normal growth rate and minor deficiency in leaf development. Few pest issues or damage, controllable. Normal branch and stem development with healthy growth. Typical life expectancy for the species.	.90-.75
Fair	Root plate reveals previous damage or disturbance and dysfunctional roots may be visible around main stem. Evidence of trunk damage or cavities with decay or defects present. Less than 30% of bark sections missing on trunk. Codominant stems are present. Branching habit and attachments indicate poor pruning or damage, which requires moderate corrections.	Crown decline and dieback up to 30% of the canopy. Overall poor symmetry. Leaf color somewhat chlorotic with smaller leaves. Shoot extensions indicate some stunting and stressed growing conditions. Obvious signs of pest problems contributing to lesser condition. Some decay areas found in main stem and branches. Below average life expectancy.	.75-.50
Poor	Root plate disturbance and defects indicate major damage with girdling roots around the trunk flare. Trunk reveals more than 50% of bark section missing. Branch structure has poor attachments, with several structurally important dead or broken. Canopy reveals signs of severe damage or topping, with major corrective actions required.	Lacking full crown, more than 50% decline and dieback, especially affecting larger branches. Stunting obvious with little evidence of growth on smaller stems. Leaf size and color reveals overall stress in the plant. Insect or disease infestation may be severe. Extensive decay or hollow. Life expectancy is low.	.50-.30

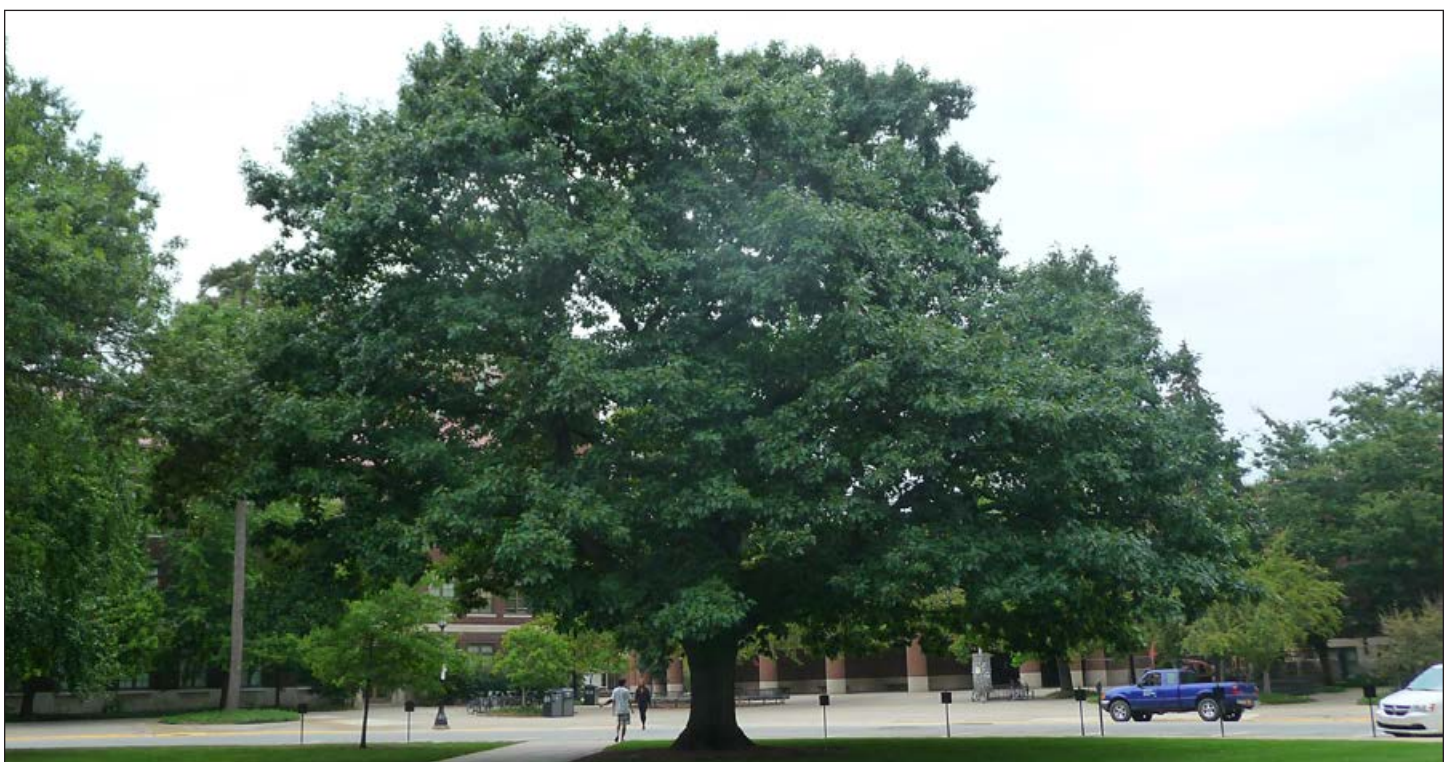


Table 3. Location Rating for Landscape Trees — Representative factors that influence location ratings and suggests formula values for various sites and applications.

Location Rating	Site Position The general appearance and quality of the site in relation to the market value in the area; overall site appearance	Site Contribution The functional and aesthetic attributes the plant has on the site overall in terms of appeal and purpose	Site Placement The effectiveness of realizing benefits and the influence of the plant on contribution to the site	Formula Values
Excellent	Arboretum Well-maintained residential area Historical district Designated parks and recreation areas	Air filtration Water purification Noise abatement Erosion control	Specimen trees in a functional landscape design Single, historic or specimen tree Outstanding aesthetic value in the landscape	1.0-.90
Good	Suburban residential areas Golf course School/corporate campus Green spaces/memorials Cemetery Scenic parkways	Windbreaks Shade/cooling effects Specific plant aesthetic factors Structural accents	Considerable element in the landscape for design quality or function Plants in a windbreak, screen or other integral planting Planting allows maximum functional benefits	.90-.75
Fair	City streets/boulevards Rural residential areas Urban streets Industrial/commercial areas	Framing views Space definition Privacy	Well-spaced planting site Tree installation in planting pits or lawn strips Mass, unplanned plantings on a site	.75-.50
Poor	Streets/roadways in rural areas Woodlots, managed Freeways/interstates Countryside, naturally occurring woodlands Woodlots, unmanaged	Traffic management Create vistas Screening	Trees with utility interaction Improper spacing with infrastructure conflicts Species with fruit or leaf litter issues Invasive species	.50-.30

PURDUE AGRICULTURE

09/12

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